

# White Paper Report

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# DIGITAL I. START-UP: NEEDS ASSESSMENT & PLANNING

## ***CRAFTING FREEDOM, A MOBILE TOUR ALONG NC HIGHWAY 86:***

### ***Using Mobile Technology to Enhance a Tour of African American Historical Sites and Museums along a WPA Historical Highway***

*"Roads have not developed by accident; the general course of all routes of importance has been worn by large numbers of people who wanted to go from one place to another...Thus the tour route is often a thread upon which a narrative can be built."*

Katherine Kellock  
National Tours Editor, WPA State Guide

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## Rationale

For decades studies have shown that Americans' knowledge of their own history is seriously deficient. This has been attributed in part to the marginalization of history as a subject in the K-12 curriculum and also to uninspiring approaches to teaching history, such as memorization of dates. Public understanding about the role that minorities have played is especially lacking.

At the same time that knowledge of history has hit a serious low, there has been an explosion in the number of historical sites and cultural institutions that feature important local and regional history—half of which are located in small rural towns or in remote off-the-beaten track areas. Studies have shown that these institutions struggle to reach a broad audience and have very few opportunities for funding or technical assistance. Many deal with the experiences of minorities and sub-cultures.

This white paper addresses the intersecting challenges of a population deficient in historical knowledge, and the opportunities to educate represented by small town historical and cultural institutions. This white paper poses the questions: Can we take a live tour of historic sites, museums, and landscapes along a rural highway—for which much historical research and rich digital media assets have already been developed—and use mobile technology to leverage this existing knowledge? Can already-produced media enhance an educational tour accessible to a much broader population? And in so doing, can we address both the needs of resource-challenged small historic sites and also the larger societal need for Americans to have a greater appreciation of and engagement with their own history?

## Principles

The development of *Crafting Freedom, a Mobile Tour Along NC Highway 86* is based on several underlying assumptions or principles:

- Use open-source technology platforms for mobile media development.
- Honor the inclusive vision for the WPA State Guides written in the 1930s.
- Develop mobile media using a multi-tier approach.

This will allow mobile devices of varying multimedia functionality to access the same base of historical information, but at a level concordant with a device's capabilities. For example, iPhones with GPS and video screens will present a location-aware multimedia experience, while other MP3 players and older cell phones might access an audio-only tour. The objective is to make *Crafting Freedom Mobile* widely accessible by providing it through several "tiers" of mobile technology.

- Use the expertise of diverse interests and existing assets—including small rural museums, historical sites, existing educational materials, and educator/scholarly knowledge—to present American history at the specific sites where historical events occurred.

## Introduction

This Level I Digital Start-Up grant enabled the critical first steps to be taken in the conversion of a live history tour into a mobile-technology enhanced experience. With this level of funding we were able to complete a needs assessment with historic site leaders and educators, to identify design directions for the mobile tour, and to begin specifying content delivery through a range of mobile tour formats including audio, video, and gaming. The Apprend Foundation has already produced the bulk of digital content with previous funding from the National Endowment for the Humanities and other contributors.

*Crafting Freedom, a Mobile Tour Along NC 86*, also known as *Crafting Freedom Mobile*, is based on an existing live tour—*Crafting Freedom: Thomas Day and Elizabeth Keckly, Black Artisans, Entrepreneurs and Artists in the Making of America*—which was developed as part of an NEH-funded Landmarks in American History and Culture Workshop. The *Crafting Freedom* live tour has been offered to over 400 K-12 teachers between 2004-2007 and will again be offered to 80 teachers in the summer of 2011.



Thomas Day's  
*A Face in the Mantel*

## Needs Assessment and Planning

A planning team with expertise in technology, multimedia development, smart game design, instructional design, historic site interpretation, and classroom teaching spent a year assessing needs for the adaptation of the *Crafting Freedom* live tour into a mobile experience and conducting preliminary planning for the tour's development.

The needs assessment included:

- Identifying needs of historic site leaders.
- Identifying attitudes of K-12 teachers about educational technology and field trips.
- Planning sessions (both in-person meetings and teleconferences) to achieve consensus about the most critical needs and to set content priorities for the mobile tour and design directions.
- Simulation of the mobile tour featuring live presentations and demonstrations of extant media in a "drive-through" experience.

- o Team recommendations for design directions and optimal tier(s) of delivery for *Crafting Freedom Mobile* based on needs identification, extant media, and consensus achieved during planning sessions.

### Summary of Findings (Lessons Learned)

Many of the needs of historic sites along NC 86 can be effectively met with a mobile tour that links the sites around shared historical and cultural themes. The most strongly articulated need was for greater engagement of locals with a major focus on youth. Youth involvement is seen as critical to the future sustainability of sites. Site leaders also wish to involve more culturally and economically diverse members of the local community and wish to dispel the widespread perception that historic sites are private clubs for wealthier citizens.

The educators surveyed used mobile devices such as cell phones and iPods outside of the classroom, but none yet used mobile technology in their teaching. Not surprisingly then, they expressed very few needs or attitudes that were clearly matched to the properties and potential educational benefits mobile technology offers with the one exception: features they identified that make field trips effective are also features that mobile technology can accommodate. Hands-on and interactive activities and alignment of field-trip content with educational curriculum standards are criteria that mobile technology-based historic tours are able to address. While inexperienced with mobile technology applications, 80% of the educators were very positive about the value of field trips and believed they were a vital supplement to classroom learning. The majority of teachers could envision how using mobile technology might enhance field trips to historic sites and museums especially if hands-on activities, interactivity, and standards alignment were incorporated.

The “multi-tier approach” emerged in our early planning as a framework and “taxonomy” for conceptualizing mobile media deployment (and development) for *Crafting Freedom Mobile*. The rationale of this approach is to ensure that the greatest number of people have access to tour content even if they only have access to basic mobile devices (i.e. audio-only iPod or MP3 player). Indeed, given the low cost of iPods and MP3 players, these could easily be purchased by sites and loaned to tourists who do not possess personal mobile devices. As a developmental tool, the multi-tier approach simply means that even if a high-tier approach to the mobile tour is deemed optimum (such as an approach that uses GPS or game-ification) there will still be the commitment to make the content available at lower tiers of mobile technology deployment such as audio only and audiovisual only.



## Multi-Tier Approach

- Tier 1: Content via audio snippets (basic MP3 players, older iPods, some phones)
- Tier 2: Content via audiovisual (recent generation iPods, some phones, nearly all smartphones)
- Tier 3: Content via game-ification without GPS (current generation iPods, iPads, some smartphones)
- Tier 4: Content via game-ification with GPS (iPhones, Android phones, iPads and Android-powered tablet devices)
- Tier 5: Content via augmented reality (iPhones, Android phones, iPads and Android-powered tablet devices)

For a more detailed explanation of the multi-tier approach and its relationship to *Crafting Freedom Mobile*, see: Appendix I. Multi-Tier Approach to *Crafting Freedom Mobile*.

## Game-ification

The “game-ification” of *Crafting Freedom Mobile* was a design direction that the team determined to be the optimal approach for meeting the most significant needs revealed by the site leaders and educator studies. Games are ideal for involving youth (both as designers and consumers) and for providing structure and motivation to engage with each site as well as to tie sites together into a comprehensive experience. Games lend themselves to the requirements educators have for field trips such as: hands-on activities, interactivity and learning tied to curriculum standards. Moreover, games are increasingly being seen as the future of educational media and technology.



Image from EWTB

A recent *Scientific American* article described games as “world changing” and noted that an effective game “harnesses basic human motivational tendencies and capitalizes on the natural curiosity of human beings to ‘master their environments.’”<sup>1</sup> It is also relevant to note that members of the *Crafting Freedom Mobile* team have considerable experience and success designing and producing history educational games. Laurel Sneed

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<sup>1</sup> John Pavlus, Tom Vanderbilt, Elizabeth Svoboda, Melinda Wenner Moyer, and Matthew L. Wald, “World Changing Ideas 2010: Ten Thoughts, Trends and Technologies that have Power to Transform Our Lives,” *Scientific American*, November 2010: 44.

and Leah Potter were creators (designers and producers) of Exploring the World of Thomas Day (EWTD) the first smart game NEH funded. Sneed—working with Potter as a contributing designer—designed the interactive multimedia game *Vietnam Views and Voices* in 2000, which received the highest award of educational software excellence given by *Technology and Learning* magazine that year along with only two other educational software programs. The planning team suggested that some of the features and functionality of EWTD be adopted for *Crafting Freedom Mobile*, such as searching for information contained in primary source documents and artifacts—real and virtual; creating spheres or content domains to explore and master; and having an open architecture design in which the user elects to play or not to play the game by simply accessing audio or audiovisual and textual content at Tier 1 (audio only) or Tier 2 (audiovisual only).

Using the capability of digital video and digital stills to convey stories of real people told in their own words was another strongly recommended design direction for *Crafting Freedom Mobile*. The power of stories was exemplified by the personal letters of Thomas Day and Elizabeth Keckly and also by the stories recounted by Nellie “Chubbs” Miles (1946–), a former tobacco sharecropper who grew up just off of NC Highway 86. “Chubbs” gave a presentation using PowerPoint, which featured 1930s photographs (many taken by Dorothea Lange, a highly-regarded 20<sup>th</sup>-century WPA photographer) of her rural neighborhood. Miles’s stories of triumph and tragedy in the face of oppression and economic injustice revealed fascinating details about the sharecropping lifestyle her family lived through. Having grown up on the same land where her enslaved ancestors worked, she is a “living history” example of the “crafting freedom” theme. The team felt Miles should play a major role in the mobile tour, as a digital storyteller or guide. In addition, the team felt that the personal narratives of other black “freedom crafters” along NC 86 should be featured, and told (to the greatest extent possible) in their own voices.



Tobacco fields along NC Highway 86

Remnants of tobacco’s centuries-long domination in this region are ubiquitous on NC 86, and there are still tobacco fields along this route to be seen in the late spring and summer. Tobacco architecture, such as curing and packing barns, sharecropper and tenant houses, and other buildings offer rich opportunities to teach about economic themes such as labor, production, and economic inequities. The Richmond-Miles Museum in Yanceyville, NC also provides many opportunities for

engagement with artifacts and primary source material—much of which is related to rural life and the tobacco culture.

Additional funding will be sought to prototype a “game-ified” version of *Crafting Freedom Mobile* and selected mobile tour components will be developed and tested working closely with local youth, educators, and parents on prototype development and testing.

### Inspiration: WPA Federal Writers Project

*Crafting Freedom Mobile* was inspired by the Work Project Administration's (WPA) Federal Writers Project established by President Franklin D. Roosevelt during the Great Depression. Thousands of out-of-work researchers, historians, journalists, and writers were hired to develop the American Guide Series, tour books for each state and several major cities. The highway tours are the most successful feature of the guidebooks. There are 33 highway tours in the *North Carolina Guide* published in 1939. Tour 11 in the North Carolina State Guide tracks history and culture along NC Highway 86.



Plowing, ca. 1939



Tenant House, ca. 1939



Topping Tobacco, ca. 1939

The creators of the State Guides sought to capitalize on the increased mobility of ordinary citizens. The new phenomenon of widespread automobile ownership enabled citizens to drive to the places where history happened along American highways. The idea for the guidebooks was to provide “location-aware” historical knowledge of such places—even if there was no site or remnant of the historical event at the location. The exceptionally well-researched tours overlaid historical and cultural content on highways; as Katherine Kellock, the national tour editor of the State Guides put it: “... the tour route is often a thread upon which a narrative can be built.”<sup>2</sup>

Following in the tracks of the State Guides, *Crafting Freedom Mobile* aims to deploy current and emerging mobile technology—in concert with automotive technology—to facilitate richer interactions and deeper engagement at the rural museums and historic sites in small towns along the route of Tour 11 (NC 86)

<sup>2</sup> Christine Bold, *The WPA Guides: Mapping America*, Jackson: University of Mississippi Press, 1999, 66.

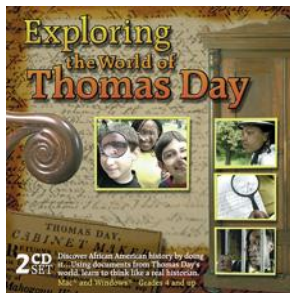
in the *NC Guide*. A goal of the WPA State Guides was to provide a much more inclusive portrait of America by treating all ethnic groups and social classes. This aspect of WPA's vision was not fully realized, given the racism of the times. *Crafting Freedom Mobile* aims to address this deficiency by bringing out of the shadows African American stories of survival and achievement along NC 86 in the 19th as well as in the early- and mid-20th centuries.

## Project History

### Thomas Day Education Project and the Apprend Foundation

Over \$2,000,000 in NEH and other funding has been granted to the Apprend Foundation, Inc. (and the Thomas Day Education Project) over the past decade for research, teacher workshops such as the Crafting Freedom Workshop, tours, public presentations, and digital media development. The primary topics have been the cabinetmaker, Thomas Day, with a secondary focus on Elizabeth Keckly and other artisans, entrepreneurs, and abolitionists from the antebellum period. (See: [www.apprendfound.org](http://www.apprendfound.org)).

From 1999–2002, *Exploring the World of Thomas Day* (EWTD) was developed and was one of the earliest smart games NEH funded. It modeled the detective-like process of doing historical research with primary source documents. EWTD



Cover of EWTD

received multiple national and international awards, including being named one of the top 25 educational software programs of 2002 by *Technology and Learning* magazine. Over 50 primary source documents, several videos, and other visual and textual digital assets were developed for EWTD and for other NEH-supported digital media projects over the past decade including the Crafting Freedom website. (See: [www.craftingfreedom.org](http://www.craftingfreedom.org).)

In sum, a great deal of digital media that directly relates to the topics and themes of the NC 86 tour has already been produced and is the property of the Apprend Foundation. When converted to a mobile technology enhanced tour, this would enable a much wider audience to engage with the little known, yet fascinating and significant history along this rural highway. At present, because of the large number of live presenters involved, it is prohibitively expensive for most people to take this tour. It is only with very generous NEH funding for the Landmarks Workshops that this tour can be offered.

### Apprend's Collaboration with the American Social History Project (ASHP) and Dr. John M. Vlach

In 2008 Laurel C. Sneed of the Apprend Foundation contacted Leah Potter of the American Social History Project (ASHP) at the City University of New York. Potter serves as a consulting partner at ASHP on *Mission US*, an educational video game funded by the Corporation of Public Broadcasting's American History and Civics Initiative. Sneed explained how she was inspired by the WPA guides to convert the vast multimedia assets created for EWTD and the Crafting

Freedom tour and website into a mobile technology-based tour along NC 86. The *Crafting Freedom Mobile* concept aligned well with ASHP's mission, which is concerned with "renewing interest in history by challenging traditional ways that people learn about the past"(see: [www.ashp.cuny.edu](http://www.ashp.cuny.edu)). Potter shared the concept for *Crafting Freedom Mobile* with colleagues including Donna Thompson Ray, Project Director for Faculty Development Programs at the American Social History Project (ASHP). Ray is very knowledgeable about black history and also experienced in using material culture and new media to teach history. Potter, Ray, and others at ASHP soon became involved as contributors.

Another key contributor to this effort is John M. Vlach, Professor of American Studies and Anthropology at The George Washington University and director of the University's Folklife Program. For more than 30 years, he has concentrated his scholarship on aspects of the African Diaspora by conducting field research in Africa, the Caribbean, and the southern regions of the United States. His 10 books cover numerous topics in American decorative arts, vernacular architecture, and rural landscape. Sneed contacted Vlach with whom she has long been associated through her research on Thomas Day. Vlach told her about similar projects in which he had been involved. He expressed excitement about *Crafting Freedom Mobile's* potential to help small historic sites and museums "trade in their local historical and cultural assets" and to reach a broader audience more effectively. Dr. Vlach was interested in being a consultant on the project and participated by providing a very informative lecture about traditional architecture along NC 86, and by participating in the tour simulation with helpful content and design suggestions.

For more information on the entire team, see: Appendix 4. Meet the Team.

## Identification and Analysis of Needs and Attitudes

Two groups participated in the needs identification and analysis:

- leaders of museums and historic sites along NC Highway 86;
- and, a group of K-12 educators, some of whom had experienced the live Crafting Freedom tour.

### Needs Identified by Historic Sites

#### Method

We conducted a focus group with the leaders of the following three sites along NC 86:

- The Burwell School in Hillsborough, NC, which was a 19th century girls' school where Elizabeth Keckly was enslaved.
- The Richmond-Miles Museum in Yanceyville, NC, which serves as a repository for artifacts and primary source documents mostly related to Caswell County people, their traditional rural lifestyles in a culture and economy dominated by tobacco.
- The Thomas Day House/Union Tavern in Milton, NC, Day's former shop and home designated a National Historic Landmark. It currently houses 13 pieces of Day furniture and allows hands-on interaction with the furniture.



Union Tavern, Milton, NC

The focus group discussion was digitally recorded, transcribed, and interpreted using content analysis techniques.

Despite major differences economically, politically, and educationally among the three sites' communities, there was a high degree of consensus about their most pressing needs and the potential for a mobile media-enhanced tour to meet these needs. Some of the ways mobile technology seemed to be matched to site needs were brought up and discussed by the site leaders during the focus group. Later, these perceived "matches" of site needs with mobile technology properties influenced the planning team's views of design directions and prototype planning.



We believe that the “match” between mobile technology capabilities is significant given that 20% of all Americans live in rural areas and 50% of museums/cultural institutions in the United States are located in small, rural towns. Moreover, as this case study along NC 86 corroborated, small museums have very few—in fact the fewest—opportunities for funding or technical assistance of any group of museums. (See: Museums on Main Street at [www.museumonmainstreet.org/about.htm](http://www.museumonmainstreet.org/about.htm).)

## Findings

### **Finding 1: Need Greater Understanding among Locals about Each Site's Historical Significance and Mission to Serve a Broad and Diverse Public**

The local community's lack of knowledge and appreciation of the historical/cultural significance of sites was frequently mentioned. Related to this was a lack understanding of historical research and historical thinking processes. Moreover, the sites and museums are often seen by the public at large as elite clubs in their communities. Youth and minorities, such as African Americans and Hispanics, often feel “uninvited” even though some sites have programs targeting these groups.

A needs analysis led to the following ideas about how to address the lack of local involvement:

- Develop new methods of community outreach and marketing.
- Invest in creative ways to teach locals about sites.
- Provide classes/seminars to teach locals about the historical and cultural assets at the sites.
- Conduct additional research and provide professional interpretation and presentation of the history and culture at the sites.
- Dispel the stigma that sites are exclusive clubs.

### **◀◀ How might a mobile technology enhanced tour address this finding? ▶▶**

- A mobile tour is a creative way to teach locals about the significance of the historic sites.
- A mobile tour development project itself will help market the site by garnering statewide and national press attention; this will provide the occasion to focus on a commitment to the broadest possible segment of the local community.



### **Finding 2: Need More Youth Involvement at Historic Sites along NC 86**

All site leaders emphasized that historic sites' sustainability required the commitment of local youth. There was consensus among the site leaders that if youth don't understand and value the historical sites, they will not survive in the future.

Site leaders expressed the desire to be more knowledgeable about how to design programs using technology around "how young people learn." One site leader was also a classroom teacher who commented that national studies confirm a widespread lack of knowledge among youth in the Piedmont Region of North Carolina about local, as well as national and international history.

◀◀ How might a mobile technology enhanced tour address this finding? ➡➡

Site leaders were animated about mobile technology because they view youth as natural users as well as contributors to mobile technology applications since they are already very comfortable with mobile devices, such as iPods, iPads, and smartphones, which they use and depend on in their daily lives. A 2004 study (Pew Internet and American Life Project) found that 45% of American teens had cell phones. In just four years, that number jumped to 71%. Data for 2010 was not included in the Pew Study published in August 2009, yet this rapid rise in teen ownership of cell phones suggests that current youth usage is well over 71%. Smartphones have dropped significantly in price, and it is estimated that smartphones will overtake standard cellular phones in the U.S. by Q3 2011. In addition, 4% of U.S. households currently own tablet devices such as the iPad or Android-powered tablet devices, and this number is expected to rise significantly over the next several years (Nielsen).

### **Finding 3: Need More Knowledge of Uses of Technology at Rural and Small Town Historic Sites/Museums**

Mobile technology is dramatically impacting every aspect of society, yet the technology revolution is perceived to be "by-passing" many small historic sites and museums. Most site leaders were not aware of how new and emerging technologies could impact their sites. One leader put it this way: "If such research exists, it has not yet trickled down to us."

◀◀ How might a mobile technology enhanced tour address this finding? ➡➡

Because the development of the mobile tour is a state-of-the-art application of mobile technology, sites along NC 86 will be on the cutting edge of technology deployment in cultural and historic tourism. By being involved in the *Crafting Freedom Mobile* experience, sites acknowledged they would gain a great deal

of technological know-how that would advance their knowledge of other types of technology as well.

**Finding 4: Need to Address Lack of Physical Access to Sites and Lack of Access to Consistent Quality Historical/Cultural Content**

This is a “two-pronged” need. First, there is the need for greater physical access to the sites; secondly, there is the need to have access to better quality, scholar-vetted historical content about some sites. Physical access is a major concern because all of the museums or historic sites have limited hours of operation. The Burwell School, open four days a week, is the most accessible. It offers an impressive array of programs and events during the day and evenings. The Richmond-Miles Museum is open three afternoons, or twelve hours per week, with some additional programs and tours throughout the year. The Union Tavern has a sign in the front window with names of volunteers who tourists may telephone if they wish to gain access. There are no regular hours although special tours can be pre-arranged for tour groups and there are regular yearly tours and events.

◀◀ How might a mobile technology enhanced tour address this finding? ▶▶

Because the information about the site would reside on the mobile technology application, the quality of the content could be controlled and there would not need to be a heavy reliance on a cadre of trained docents to deliver historical content. Since small under-funded sites/museums are often challenged by a lack of qualified docents, more ready access to high-quality, consistent site interpretation is a value-added feature that mobile technology-enhanced tours can offer. Moreover, this can be achieved with Tier 1, audio-only technology, which is the most affordable mobile technology platform to develop.

**Finding 5: Need for More Effective Collaboration within and Among Historical Sites and Organizations**

One site leader stated, “I am aware of organizations that are relevant to historical associations and small museums, but I am not sure what to do with them.” It is common for the leaders at small local historic sites and museums to be volunteers and to lack a professional background in historical site management. This means that membership in professional organizations that encourage partnering and collaboration is rare.

◀◀ How might a mobile technology enhanced tour address this finding? ▶▶

Clearly, working together on a mobile tour that links the sites along NC 86 will increase collaboration for mutual benefit. It is noteworthy that since the focus

group, two of the sites have worked together on a project unrelated to *Crafting Freedom Mobile*. The simple act of meeting to discuss shared interests spurred collaboration. None of the site leaders had ever met before together to discuss their shared needs or interests. Isolation has been documented in other studies as a major problem for rural museums and historical sites in the United States. (See: <http://www.museumonmainstreet.org/about.htm>.)

## Needs Identified by K-12 Educators

### Method

A survey was developed by the ASHP team to identify teacher attitudes about using educational technology and also to discover attitudes about field trips and using technology on field trips. Names and addresses of teacher participants in the Crafting Freedom Workshop 2004–2006 as well as names and addresses of teachers participating in the workshops offered by the American Social History Project (ASHP) were gathered. The individuals were sent an online survey and asked to respond in writing. Their written responses were collected, digitized, tabulated, and analyzed by the ASHP team. This was not a random, statistically representative sample. All educators who responded and filled out the survey were included in the sample.

### Description of Survey Respondents

Over a third of the educator respondents to the survey were in the 51-60 age group; the next largest group (23%) was in the 31-40 age group. Five states were represented: New York, North Carolina, South Carolina, Georgia, and Michigan with the vast majority (70%) teaching in urban schools and least (10%) in rural schools. Ninety percent taught in public schools. Elementary, middle, and secondary grade levels were all represented, with the largest group of respondents teaching 11th grade (40%). The majority of respondents (75%) taught social studies and the next largest group taught English/Language Arts. Teachers of other disciplines were also represented. Nearly 2/3 of the educators had 10+ years experience.

### Findings

#### **Finding 6: Respondents Not Teaching with Mobile Technology**

While most educators surveyed owned cell phones, portable audio players, and laptop computers, they used these devices in their personal lives, but not in their professional lives with the exception of laptop computers (which almost 40% used daily in their professional lives). Among smartphone users, Android-powered phones are currently most popular (32%) and then Blackberry (31%),

and then the iPhone (25%) as of March 2011.<sup>3</sup>

◀◀ How might a mobile technology enhanced tour address this finding? →→

This group of teachers did not have experience with mobile technology in educational settings or on educational tours. This finding suggests that if teachers and their students were more exposed to educational mobile technology they may have more input about what it can offer. This underscores that it is imperative to involve teachers and their students in prototype development and testing.

### **Finding 7: Lack of Technology Equity Hampers Teacher Use of New and Emerging Technologies**

Many teachers expressed reluctance to make assignments or implement instructional experiences that rely on technology due to inequities in accessibility. This observation was not about mobile technology, but about technology in general. Wealthier students, for example, generally have personal computers at home and can afford more expensive smart phones and the latest devices such as iPads and other tablet devices, whereas economically challenged students may not have as ready access to such devices.

◀◀ How might a mobile technology enhanced tour address this finding? →→

The multi-tiered approach specifically addresses technology equity by ensuring the tour is created with broad access via a range of mobile devices. (See: Appendix I. The Multi-Tier Approach to *Crafting Freedom Mobile*.)

### **Finding 8: Teachers who Self-Identify as “Early Adopters” of Technology are Not, in Fact, so “Early” to Adopt**

While some of those surveyed defined themselves as “early adopters,” their reports of actual usage trends reveal that this group waits for a technology to be widely adopted before adapting it for themselves. They are even slower to adopt new and emerging technology into their teaching. One respondent summed up her technology usage in this way:

“I rely on my Blackberry for personal use, but as far as mobile technology for the classroom, it will take some time for my school to make the transition.”

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<sup>3</sup> Nielsen (<http://techcrunch.com/2011/03/03/nielsen-android-pulls-ahead-of-rim-and-ios-for-u-s-smartphone-share/>) Accessed March 15, 2011.

However, many respondents saw value in using mobile technology in conjunction with history tours. (Only one individual surveyed voiced some doubts.)

◀◀ How might a mobile technology enhanced tour address this finding? ➡➡

This finding is a commentary about the reluctance of educators to adopt new technologies in general into their teaching. It suggests that if mobile technology-enhanced field trips are to be embraced by teachers, the tours must effectively meet criteria teachers deem important before their hesitation and resistance will be overcome. It also underscores that teachers and their students must be closely involved with the design and prototype development of mobile tour prototypes.

### **Finding 9: Field Trips are Valued by Over 80% of Teachers Surveyed**

Over half of the educator respondents arrange a field trip 1-2 times per year and 86% take their students to a local museum or historical site; 46% take their students to a museum or historical site in another city of state; and 32% take their students to a national park or campground. All teachers take field trips to strengthen curriculum and the vast majority (82%) take field trips to teach local history and culture.

Other reasons given for field trips were:

- providing a break from the classroom;
- providing “variety” or “mixing things up” to make learning seem more like exploring and having fun rather than like typical school work; and,
- the power of “real places” to teach.

An educator commented about the “power of place” with this observation: “being at the place where slaves lived and worked conveys more about the realities of slavery than a book could ever do or even a video.”

The main obstacles to arranging field trips for educators were: cost; transportation; school approval; and the pacing calendar.

◀◀ How might a mobile technology enhanced tour address this finding? ➡➡

This finding suggests, as does Finding 8, that if teachers are to adopt mobile-technology tours, they need to have very positive experiences with them, which

means that the mobile tours must address their requirements identified by the survey:

- hands-on experiences tied to learning goals;
- pre and post activities that prepare students for learning on the field trip and then assess what they learned; and,
- interactive, engaging, age-appropriate learning experiences connected to the curriculum.

### **Finding 10: Problems with Availability and Reliability Discourage Use and Early Adoption**

Because those surveyed had little experience with mobile technology in a tour or educational application, this lesson refers primarily to educational technology in general. It reflects the chronic problems teachers have using computers in school settings, i.e. problems with servers and getting online, problems with students accessing inappropriate web material, and problems getting service support when hardware or software does not work.

◀◀ How might a mobile technology enhanced tour address this finding? ▶▶

As we scale this project to other historic and cultural sites in remote locations, we may face problems with signal strength. Here again, the multi-tier approach will be critically important because it will ensure that there will always be a range of modalities through which to access mobile tour content

In sum, there was a general mismatch between mobile technologies and classroom environments/educational uses which was the opposite of the strong “match” between needs of historic sites/museums along NC 86 and the properties and capabilities of mobile technology to meet those needs. The one exception to the educational “mismatch” was the high value that educators surveyed placed on field trips. For *Crafting Freedom Mobile* to be embraced by educators it must incorporate features that teachers deem critical. This strongly indicates that prototypes should be developed, tested, and shaped with input from teachers and their students to help ensure that teachers adopt mobile technology-enhanced tours.

## Design Directions for *Crafting Freedom Mobile*

Our major planning and design meeting took place with the entire planning team during the weekend of March 12-14, 2010 in Chapel Hill, North Carolina. (For details on the daily events and activities for the meeting, see: Appendix 5. Agenda for the March Meeting.) The goals of this intensive weekend meeting



Major Planning and Design Meeting

were: to review the findings from site leaders and educators; to review extant digital assets that have already been produced that relate to content along NC Highway 86; to review the technology report; and to actually “drive-through” and roughly simulate the mobile tour along NC 86. After these experiences, the team gathered for four hours to identify key design directions for the mobile tour, including some desired features of *Crafting Freedom Mobile*.

### Design Direction 1: “Game-ification”

“Game-ification” of the mobile tour was strongly embraced among planning team members because so many of the expressed needs—especially the importance of youth involvement and the need for high motivation and structure—indicated a game-based tour direction. It is noteworthy that this strongly articulated design direction supports a similar finding from another Digital Humanities mobile technology White Paper for *Murder at Harvard Mobile* that observed:

*“Creating an optional gaming experience around a tour merits further exploration, especially if it helps motivate and sustain the audience’s own curiosity about the details of the case and clues found along the walking path.”<sup>4</sup>*

The key reasons the planning team gave for the game-ification of *Crafting Freedom Mobile* were:

- Game-ification would provide structure, engagement, and motivation to remain engaged within a site and to travel from site to site. One team member commented:

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<sup>4</sup> Michael Epstein, *Murder at Harvard Mobile*, NEH Digital Humanities Start-Up White Paper, Boston: Untravel Media, March 19, 2010, 13.



*For me, trips with my family were horrible with the unstructured tedium. By giving them a game framework; they might actually be excited to come back to the "tour." You can build a sort of "logic" model into the game. For example, you can help out Keckly through her day as she struggles with the unjust demands of the household; you can help out Chubbs's family, get the chores done, calculate the interest on their share of the tobacco crop; or you can help Stephen Slade [a slave who allegedly "stumbled upon" the way to produce the economically successful bright leaf tobacco through adjustments in the temperature in the tobacco curing barn] could calculate the temperature needed so that the tobacco turns the desired "golden" color...Game activity could be on-going while they're driving along 86 in the car.*

- Game-ification would address the "down-time" and "tedium" of the long drives between sites, as one team member observed:

*The drive-through [time on highway between sites] was sleepier and more static [than the rest of the live tour] so that you incorporate engaging tasks like filling in a booklet/crosswords that are part of the game experience in order to keep their whole interest up. Kids can zone out between sites—having to do the booklet or watching a video and answering questions about it on the cell phones while they're continuing to work through the game.*

- A game design should provide optional paths/eras or subject matter selections to explore depending on interest and audience needs. One team member expressed this idea in this manner:

*The game could have multiple paths dependent on what historical era you wish to explore, i.e. where do we want to go? 1935? 1835? Just as the missions on EWTD are structured on the basis of "spheres" of Thomas Day's world, the mobile tourists' "missions" could be structured on the basis of a mission or collection of missions and activities per/historical site.*

Benefits of game-ification discussed in the planning meeting often referenced the Apprend-created smart game, *Exploring the World of Thomas Day* and how



its features and functionality might be replicated for a game-ified *Crafting Freedom Mobile* tour. Just as EWTD was successful in teaching the detective-like experiences of doing historical research and the critical thinking skills required when interpreting information on historical documents, this same approach would be an effective means of acquainting mobile tourists with the lives and struggles of key historical figures along the route such as Day and Keckly, as well as provide broader historical context about the period in which they lived.

## Design Direction 2: Deploying Digital Videos and Stills to Tell Stories of African Americans Along NC 86

A live presentation by Nellie “Chubbs” Miles that incorporated black and white photographs of the rural neighborhood she lived in during her childhood (including many photos taken by Dorothea Lange and other WPA photographers) had the greatest impact on team members of any mediated or live experience on the mobile tour simulation. This strong reaction to Miles corroborates the research finding that the greatest physiological arousal is achieved in mediated or “live experiences” when responding to real people and real experiences, rather than responding to actors playing a role.<sup>5</sup>

Miles is an African American seamstress and dress designer, born and raised on a tobacco plantation five miles off of NC Highway 86 where her ancestors had formerly been enslaved. She and her siblings were the third generation to grow up in tobacco sharecropping and the first generation to leave the land for factory and other work that paid regular wages. For the mobile tour simulation, Miles showed a PowerPoint presentation of recent photographs she had taken of major places she spent time during her childhood intermingled with photographs taken in the 1930s and 40s. The Lange photographs—many taken in Miles’s rural neighborhood—depict the sharecropping lifestyle, little changed since Reconstruction, which Miles experienced firsthand. The team felt that Miles’s “living history” presentation supplemented by digital visuals from the past and present symbolized African American strength and resilience in the face of racial and economic oppression and embodied the “Crafting Freedom” theme. The team was unanimous in their view that Miles needed to be “integral” to *Crafting Freedom Mobile*; she should serve as both a digital story teller and “living link” to slavery, Reconstruction, and the “debt slavery” that was a common result of the sharecropping system. (See: Appendix 3. Debt Slavery as Experienced by Nellie “Chubbs” Miles.)

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<sup>5</sup>Byron Reeves and Clifford Nass, *The Media Equation: How People Treat Computers, Television, and New Media Like Real People and Places*, Center for the Study of Language and Information Publication Lecture Notes, 2003.

In addition to Miles's stories, the team wanted the tour to include more stories of "lived experiences" of individuals and especially of African American families who "crafted freedom" in the face of oppression by creating greater opportunities for themselves and others.

Features of stories the team identified are:

- Stories need to be truthful.

*"We need to look at models of historical tours that address painful truths through stories."*

- Stories need to connect the experiences along NC 86 to the present day treatment of economically challenged agricultural workers:

*[The "debt slavery" Miles's family experienced] is like those check stores where you're never going to get out of debt. It's also relevant to look at what happened to the black farmers who couldn't get USDA loans so went broke—and now with the migrant workers from Mexico! These groups are still being abused, especially those who have 'language issues' or math or other literacy issues. This kind of financial and personal abuse is still happening. And, what about Wal-Mart? They charge \$3 to cash a check! Get real—it's poor people like migrant farm workers who use these services and continue to be victimized!*

- Stories provide details of what the past was like and make the landscape come alive:

*"When we're driving along and we don't know what we're seeing—'Chubbs' puts a name, place, characters over it all. I feel more attached to the people—when I listen to her stories—she feels like grandma telling stories..."*

- Stories need to be family-focused because the target audience is youth and many of the younger members of the audience will be taking the tour with other family members. Stories of family dynamics and situations should be especially relevant.

*"When Miles talks about growing up with her brother and sisters, it makes it all the more personal and real. Everyone can relate to having family and being in the 'same boat' together."*

### Design Direction 3: Deploying Digital Audiovisual Media to Teach about the Tobacco-Related Material Culture Along NC 86 and at the Richmond-Miles Museum

Tobacco's importance in the development of the American colonies is well-known. Its roots in America extend back to the Jamestown colony in the early 1600s, and throughout the 17th and 18th centuries tobacco continued to be the major cash crop of the Carolinas as well as of Virginia. However, we have found during the live version of the Crafting Freedom tour that the details of how tobacco was actually cultivated and processed are little understood by history teachers, much less the general public. The architectural remnants of tobacco's pre-eminence along NC 86 have much to teach, as do rural life artifacts and primary source materials at the Richmond-Miles Museum. One planning team member put it this way:

*We saw the material culture of tobacco cultivation through the buildings (or ruins of buildings) that we passed: curing barns, packing barns, sharecroppers' shacks, tenant houses, etc. These evoke what it took labor-wise to maintain that huge creation of wealth that tobacco yielded for a few landowners. We see the remnants of the systems of labor that it took to create such wealth: we have sharecropping and other forms of tenancy.*

## Game-ification of *Crafting Freedom Mobile*

The team agreed that multimedia games are an optimal approach for converting the *Crafting Freedom* experience along NC 86 into *Crafting Freedom Mobile*. First, site leaders noted that dynamic mobile technology is a natural tool of youth today, who are so accustomed to robust mobile applications on their phones and other devices. Educators believed that engagement and interactive hands-on experiences are key to effective field trip experiences as are direct ties to curriculum standards. Games can be tailor-made to meet these educational requirements. Moreover, a mobile game can provide structure as well as the motivation to stay with the tour and to “master the content” and “missions” presented at each site. By enlisting youth as game designers and collaborators, we can help ensure the effectiveness and success of *Crafting Freedom Mobile* while meeting the sites’ key need for youth involvement.

For over a decade, Laurel Sneed has led media teams that have designed, produced, tested, and implemented games for teaching history. Sneed's work spans such successful games as *Exploring the World of Thomas Day* to *Vietnam Views and Voices*. In each of these cases, game players were placed in the role of helping historical figures solve dilemmas—both great and small—which they faced in their lives. In such scenarios, game players not only confront major events of history, but they gain a better understanding of day-to-day life in a particular place and time.

### Going Mobile

While most of the existing repertoire of experiences and presentations on the live tour are in person, live facilitations with digitized audiovisual support, *Crafting Freedom Mobile* seeks to bring much of the same interactivity to mobile devices. Certain mobile platforms, including iOS and Android, allow for the development of games using video, audio, and location awareness. In this way, we can imagine game scenarios that extend well beyond the capabilities of in-person, live interactions.

### Game Possibilities

Players will enter the world of important historical figures and the actual places they lived and worked. We envision a game structured around four major locales—one for each of the three major historic sites along NC 86, and one for the drive between sites.

The main characters of the game are historical figures themselves, while the supporting cast of characters might be family and community members. Players enter their world, see the conditions of the characters' lives, and quickly are confronted with some problems the characters face. These dilemmas will be taken from accurate historical experiences the real-life characters described in letters, or derived from historical research.

### Game Locations/Characters

For the four locales mentioned above, the following are corresponding main and secondary characters:

- **Burwell School:** Elizabeth Keckly plus members of the Burwell family
- **Richmond-Miles Museum:** Stephen Slade, an enslaved worker who revolutionized tobacco production
- **Thomas Day House/Union Tavern:** Thomas Day plus his family and Presbyterian Reverend Nehemiah H. Harding



Burwell School, Hillsborough, NC

- **Along NC 86:** Nellie "Chubbs" Miles plus some of her family members

### Game Technology

Some of the technological possibilities of gaming platforms would allow:

- **Gaming Across Times:** Instead of playing the game all in one sitting, players might complete pieces of the experience on different days, or even months. This might make traveling down a specific highway repeatedly an enjoyable, game-driven, learning experience.
- **Social Gaming:** Questions might be posed to players as they visit a particular location. After answering, they can read how other visitors (or experts like scholars, researchers, and others who are knowledgeable) have recently responded to the same question.
- **Different Levels of Play:** Different levels of play can keep players coming back. For example, if you visit a site and answer some questions correctly,

you might unlock a level that allows you to integrate information learned at other sites as well.

Putting these possibilities together, we envision a game scenario in which students visit any one of the four locales and the appropriate location-specific game loads. The player meets the main character of that location, who introduces the experience and tells a bit about his/her life. Then, the character explains some decision he/she needs to make, and gives the player a “ticket” to visit the other locations. The ticket might include secret or hidden things to explore at other locations. Only by visiting all locations can a user “complete” the game, although individual “missions” can be concluded at each site. Along the way, the mobile tourist will be able to post fascinating bits of information on social networks (like Facebook and Twitter).

## Next Steps

We have identified two main next phases of our project—investigation and iterative development beginning with Tier 1 and Tier 2.

### Investigation

First, we need to conduct more research into the attitudes of local youth toward the project. Youth were not part of the initial study simply because we did not realize that they were such a critical constituency for historic sites. Now that the importance of their involvement has been identified, we need to determine youths' needs, attitudes, and interests with respect to their local historical sites as well as enlist their ideas for the game-ified mobile tour. In addition, we need to identify particular educators and their students as prototype testers for the games in development.

Second, we also need to investigate existing knowledge and research about geocaching. We need to determine how lessons learned from this form of gaming (using GPS to find hidden “caches” in remote locations) can be informative to our similar goal of a playing a “game” in the real world and especially out in remote rural locations.

### Iterative Development: A Tiered Approach Beginning with Tiers 1 and 2

Because the game versions of *Crafting Freedom Mobile* will be composed of many independent yet interconnected experiences, missions, and activities, we propose an iterative “tiered” development process. Through smaller grants, we will build Tier 1 or Tier 2 prototype applications and test them iteratively with youth, educators, and local community members. We believe that expediently providing Tier 1 media—basic mobile audio tours—will provide opportunities to strengthen collaborative relationships with sites as well as create positive good will for the project. Moreover, sites will immediately have a deliverable product they can use. This also means we can immediately begin harvesting feedback about the initial product that will naturally feed into the overall design and development of *Crafting Freedom Mobile*.

## Appendix I. Multi-Tier Approach

| TIER          | FORMAT  | OPTIMAL USE   | PROTOTYPE EXAMPLES FOR <i>CRAFTING FREEDOM MOBILE</i>   |
|---------------|---|---|---|
| <b>TIER 1</b> | <b>Content Delivery via Audio Only</b><br><br>MP3 players; iPod Shuffle   | When visual imagery would detract and not inform<br><br>When there is a lack of trained docents and/or scholar-vetted interpretation of site and artifacts<br><br>To build collaboration among sites  | <ol style="list-style-type: none"> <li>1. When driving from site to site, audio-only descriptions of the rural landscape, communities, architecture, etc.</li> <li>2. At the Union Tavern, there's a hands-on furniture museum; an audio-only mobile tour could adequately explain to tourists what features to look for and how to examine different pieces of Thomas Day furniture.</li> </ol>  |
| <b>TIER 2</b> | <b>Content Delivery via Audiovisual Devices</b><br><br>iPod Nano, Classic, Touch, iPhone, iPad, Android-powered phones and tablet devices | When visuals are critical as when showing what a site looked like "back in time"<br><br>When video (motion media) needed to conduct "how to" demonstrations<br><br>In digital story-telling where the storyteller's physical presence is key or where digital video/stills enhance storytelling | <ol style="list-style-type: none"> <li>1. Digital photographs of the Union Tavern at different times in history</li> <li>2. Seeing the interior of a tobacco curing barn "in use" as it would have been 60 years ago</li> <li>3. When on the highway and you're not sure what to focus on, a digital photo can cue you where to focus. "Find this building..."</li> <li>4. Nellie Miles is a large woman with a commanding presence and gestures/facial expressions that make seeing her important to her story-telling</li> <li>5. Demonstrating "how to" processes such a cabinetmaking technique like "planning", a sewing technique like stitching, or even a process like putting tobacco on a "tobacco stick."</li> </ol> |



| TIER   | FORMAT  | OPTIMAL USE  | PROTOTYPE EXAMPLES FOR <i>CRAFTING FREEDOM MOBILE</i>  |
|--------|---|--|--|
| TIER 3 | <p><b>Content Delivery via Games (without GPS)</b></p> <p>iPhone, iPad, Android-powered phones and tablet devices</p> | <p>When youth are a major target, games have much to offer since this is a medium through which they are ALREADY familiar and acquiring skills/ knowledge.</p> <p>When there is a strong imperative to link sites and advantages in collaboration.</p> <p>When there's a need to build stronger field trip experiences with educators and their students</p> | <ol style="list-style-type: none"> <li>1. Take characters and their stories along NC 86 and use dilemmas/challenges they actually faced in the past as opportunities for mobile tourists to get involved in "helping missions."</li> <li>2. Tourists may assist with problems large and small, such as Keckly's need to pick up a dress that is being mailed to a neighbor's house; Miles' need to calculate correct interest for her family; or Day's need to find a "suitable place" for his family to move.</li> <li>3. Gaming across places: As visitors travel from site-to-site, they can gather particular "check-ins" at different key spots. Only by checking-in at all spots across many sites can they unlock solutions to mysteries. For example, an "investigation" might require that players inspect, a tobacco barn, a historical marker, or an old church—all spread across miles of highway.</li> <li>4. Gaming across times: Instead of playing the game all in one sitting, players might complete pieces of the experience on different days, or even months. This might make traveling down a specific highway repeatedly a "new experience" with each trip a "game-driven" experience.</li> <li>5. Social gaming: Questions might be posed to players as they visit a particular location. After answering, they can read how other visitors (or experts) responded</li> <li>6. Levels of play: Different "levels" of play can keep players coming back. For example, if you visit a site and answer some questions correctly, you might unlock a level that allows you to integrate information learned at other sites as well.</li> </ol> |

| TIER          | FORMAT   | OPTIMAL USE   | PROTOTYPE EXAMPLES FOR <i>CRAFTING FREEDOM MOBILE</i>  |
|---------------|--|---|--|
| <b>TIER 4</b> | <b>Content Delivery via Gaming with GPS</b><br><br>iPhone, iPad, Android-powered smartphones and tablet devices        | <p>When locations are not well designated by historical markers or other indicators</p> <p>When manually “finding” relevant clues or information is inconvenient, like when driving or pre-occupied with other activities.</p> <p>When having to “find” something (a site, artifact) at a particular location is too time consuming, or distracting from the learning experience or when it destroys engagement.</p> <p>When “finding” the site, artifact is the goal or “reward” such as in geocaching</p> <p>With a long-term commitment and significant funding.</p> | <p>Same as Tier 3 except there is compelling justification to incorporate GPS</p>  |
| <b>TIER 5</b> | <b>Content Delivery via Augmented Reality (AR)</b><br><br>iPhone, iPad, Android-powered smartphones and tablet devices | <p>When there's significant funding potential and research has indicated that this “high level” of mobile technology deployment is optimal.</p>   | <p>If a site/museum is not physically accessible, augmented reality could present images of the interior of the site; its artifactual content, and even—with video overlays—provide a “historical figure” from the site who provides a tour around the site/location.</p> <p>As the tourist “walks along” the historical figure would follow” the same path providing information in a locationally aware manner. This could be a pre-experience prior to a return trip when one could actually gain access to the site.</p> |

| TIER                      | FORMAT  | OPTIMAL USE  | PROTOTYPE EXAMPLES FOR <i>CRAFTING FREEDOM MOBILE</i>  |
|---------------------------|---|--|--|
| <b>TIER 5<br/>(Cont.)</b> | <b>Content Delivery<br/>via Augmented<br/>Reality (AR)</b><br><br>iPhone, iPad,<br>Android-powered<br>smartphones and<br>tablet devices | When there's significant funding potential and research has indicated that this "high level" of mobile technology deployment is optimal. | There are some Thomas Day-related buildings that have been destroyed, yet pictures of them survive; through AR these could be "overlayed" on the screen showing how the site(s) looked with the building(s) present. |

## Tier 1. Content Delivery via Audio-Only Snippets

This level of mobile technology deployment is appropriate when visuals can be distracting—such as when the mobile tourist is at the wheel driving through the countryside. Tier 1 also addresses the huge problem many small museum and historic sites have, which is the lack of well-trained docents with accurate historical information or when there is limited interpretation of artifacts/site. The “value added” of a well designed, scholar-vetted Tier 1 tour cannot be over-emphasized especially since lack of trained staff and volunteers is a major problem of small sites. A Tier 1 tour component that is a natural for “prototyping” is an audio-only tour of the “hands-on” furniture museum at the Union Tavern in Milton, NC. Thirteen pieces of Thomas Day furniture are there and tourists are permitted to touch and examine them, yet there is little-to-no information conveyed about how to examine the pieces and what to look for when examining them. The only interpretation comes from plaques with limited information on each piece of furniture.

Another aspect of Tier 1 that is important to keep in mind is that there are tourists who will not have high-end mobile devices and who may not be interested in non-traditional approaches to mediated tours. One 65-year-old who took the *Murder at Harvard Mobile* tour related this perspective which may be more common among less technology-oriented and media/game-influenced mobile tourists:

*“It seems like it’s making it too silly. I’m never really into interactive gimmicks. You know something, I want to hear it, so tell me! I don’t need to have any input, I just want to receive it.”<sup>6</sup>*

Tier 1 tour components have the further advantage of being the easiest and cheapest to produce and from a developmental (prototype) stand-point have the advantage of providing an easy way to get prototypes into the field quickly from which many new lessons can be harvested. Producing audio snippets, extracting and editing audio from extant digital videos and making the resultant audio files available for download on the *Crafting Freedom Mobile* project website (probably in MP3 form) will allow those with portable audio players to save a selected set of audio files to their player. For example, at the Union Tavern the number of an audio track on an iPod shuffle could be matched to a number displayed on a piece of furniture. Moreover, given the low cost of iPods, sites could acquire audio-only mobile devices such as simple iPods and loan the devices to tourists while they are at the site. These inexpensive devices could likely be purchased through donations or small grants.

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<sup>6</sup> Michael Epstein, *Murder at Harvard Mobile*, NEH Digital Humanities Start-Up White Paper, Boston: Untravel Media, March 19, 2010, 13.

## Tier 2. Content Delivery via Audiovisual Tour

The next tier above an audio-only option is the audio plus visual option which enables digital video (including visual stills) either with or without limited locational awareness. The visual/video snippets (combined with audio) developed for this application could be downloaded and used by those with video-enabled portable players such as the iPod (from the iPod Nano on up), as well as the iPad and Android-powered smartphones and tablet devices. The video segments would then be launched manually by the user in response to cues on a map, by signage at the site or along the road, or by other cues such as “historical markers” or signposts along the highway that cue which video “track” to access. Given the example of the hands-on furniture tour above, the audio track about a piece of furniture could also be supplemented with a visual of the piece of furniture for ease of location. In addition, video clips could demonstrate to the tourist how to examine the piece of furniture and show precisely what to look for in the piece of furniture. Indeed, wherever there is a compelling need to show and tell about something—such as processes like tobacco curing or cabinetmaking—the visual/video property of Tier 2 is optimal. Fortunately, the Apprend Foundation has already produced video files of cabinetmakers demonstrating furniture-making processes such as: making dovetail joints, turning a piece of wood, and planing. These could easily be incorporated into a mobile experience available at Tier 2.

Digital storytelling could also be greatly enhanced by having a visual/video component. Not only could the storyteller be represented, but places and events s/he references could be “cut to”; for example, video/visuals of “Chubbs” could be shown during her narration, then period black and white visuals of her sharecropping lifestyle from the 1930s and 1940s could be cut in as she references relevant details.

## Tier 3: Content Delivery via Game-ification (without GPS)

Tour content delivery via game-ification opens up many exciting possibilities. As has been stated previously, games are highly relevant and engaging to youth (both as designers and consumers/players) and for providing structure and motivation for tourists to engage in each site with much psychological investment. Moreover, game formats could easily be tied to educator requirements for field trips that have hands-on activities, interactivity, and learning tied to required curriculum standards. Our planning team also has a great deal of experience and nationally recognized success spanning over a decade with historical game design and development. This means that the learning curve for this Tier of mobile technology development is not as steep as it may be for those with no background in history game design/production.

Game-ification also reflects the direction in which media and technology are heading. A recent article in *Fast Company* magazine reported that:

*Games have infiltrated our culture and our business landscape in ways that are barely recognized...97% of 12-17 year-olds play computer games but so do almost 70% of the heads of American households, according to the Entertainment Software Association. The average gamer is 34 and has been at it a dozen years; 40% are women.<sup>7</sup>*

Several team members thought that features and functionality of the *Exploring the World of Thomas Day* interactive multimedia game could be deployed to inform the design of *Crafting Freedom Mobile*. For example in EWTD, the user is introduced to four young people each modeled on a real person in Thomas Day's life and each tied to a particular "sphere" of Thomas Day's world. Each youth has a problem with which they need assistance and the game player becomes a friend or helper who has the responsibility of bringing knowledge culled from primary source documents to help the young person. The player "searches" for the clues contained within primary source documents to help solve the problem of the youth from Thomas Day's world.

To adopt this design structure for *Crafting Freedom Mobile*, we could use previously shot videos, such as the video of the letter that Elizabeth Keckly wrote to her mother (see: [www.craftingfreedom.org/keckly/video](http://www.craftingfreedom.org/keckly/video)) and find problems or dilemmas within that video that could naturally spawn a meaningful "search" for information, or a "mission." While playing the game, "going on the missions," and engaging in activities at the site, the user would be learning about the site, the people who lived and worked there, and about the historical context in which they lived and desirably, how that historical era compares/contrasts with our world today.

#### **Tier 4. Content Delivery via Gaming with GPS**

The addition of locational awareness opens up some further gaming possibilities, including the expansion of the concept discussed above using Keckly's letter to her mother to include location-specific clues and cues.

Game-ification via GPS is currently occurring with a popular GPS-based game format played by enthusiastic participants internationally called "geocaching." The game is a technology-driven treasure hunt. A geocacher places a geocache at some real location in the world, pinpoints its location using GPS coordinates and then shares the geocache's existence and location online.

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<sup>7</sup> Adam L. Penenberg, "Everyone's a Player," *Fast Company*, December/January 2011, 138.

Anyone with a GPS unit can then try to hunt for and locate the geocache. The word “geocaching” is from “geo” for geography, and “caching,” the process of hiding a cache.

It is possible that the geocaching “treasure hunt” model could be elaborated upon to provide learning experiences beyond those of merely “finding a cache” using GPS coordinates. The cache could be a primary source document or artifact containing clues that help solve a mission or puzzle or lead to another on-site “cache” with more clues. For example, using the letter Keckly writes to her mother, the user may be given the GPS coordinates of where the house of a neighbor that is mentioned in the letter is located and then may be asked to go to that location and find a cache of some kind with additional clues. Or, that challenge may be to determine the distance on a map between the two locations: the neighbor’s house and the Burwell School. If the neighbor’s house is within an easy walking distance from the Burwell School, the game may require that the user walk there and answer questions about what is currently at the site or find additional clues at the site that trigger another mission or challenge.

Receiving historical and cultural information at the precise location where an event occurred was a major part of the vision of the original WPA state guides. GPS could open up all kinds of teaching and learning possibilities at historic sites and also along the highway. Everyone knows how convenient it is with a GPS to find directions from place to place without having to pull over to the side of the road and pull out a map. The oral commands of a GPS lead the driver to precisely where they need to go (most of the time). This kind of “hands-free” information could also be helpful when driving from site to site to identify important landmarks and their significance along the highway. There may also be ways of incorporating features of geocaching into this Tier of history education mobile games and this is one of the areas that needs to be further investigated: How lessons learned from the vast experience of geocaching could be incorporated into game-ification of *Crafting Freedom Mobile*.

### **Tier 5. Content Delivery via Augmented Reality (AR)**

Augmented reality (AR) applications have moved beyond the novelty phase and are becoming technologies with educational potential that is less labor-intensive to implement than was previously the case. These applications can be accessed from many of the latest-generation mobile devices, many of which contain the necessary onboard PS, compass, and accelerometer required by AR applications to detect position, direction of motion, etc.

According to Augmented Reality Consortium Chairman Robert Rice:

*Augmented Reality is the blend between the real and the virtual. The transformational power of AR is great enough to change the way we work, play, communicate, interact, and experience media. Some of the core technologies have been in development for more than a decade, but a new convergence of powerful mobile devices, recognition and tracking algorithms, and an enormous amount of geolocative information open the door to widespread use. We recognized the need for early innovators and entrepreneurs to work together to step through that door.<sup>8</sup>*

One potential application of AR that “jumped out” vis a vis the “needs” expressed by site leaders was the problem with lack of access to rural sites and museums. With AR by pointing the camera of a mobile device at the site, say, the Richmond-Miles Museum, detailed information about the artifactual contents of the museum could appear on the screen and one could see digital examples of artifacts and samples of primary source material housed there. Small historic sites and museums have found that when their collections are digitized and made available on the internet, this favorably impacts attendance. So by seeing the exciting contents of a site via AR would likely motivate a return visit to the site during hours it is open.

Another way this Tier could aid *Crafting Freedom Mobile* is by providing views of interiors of homes along NC 86 where Thomas Day did the interior woodwork. Most of the houses where Day did the interiors—such as the Woodside Plantation and the William Long House—are not open to the public. AR could allow one to “peer inside” a building and see what it contains. Similarly, while the tobacco curing barns along NC 86 are no longer active, through AR one could see a video describing “what happened” inside a typical curing barn of yesteryear. (Today, wood burning curing no longer occurs.)

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<sup>8</sup>Augmented Reality Consortium (<http://www.arconsortium.org/home/2009/7/7/eight-augmented-reality-companies-form-ar-consortium.html>) Accessed March 16, 2011.



## Appendix 2. Mobile Technology Hardware and Software

### Hardware

Currently, it is estimated that 56 million Americans (18%) own MP3 players and that 17% of the American population own smart phones. The tablet market is rapidly expanding, and it is estimated that Apple will sell eight million iPads in 2011, not to mention the sales of competitive tablet devices. These figures are based on reports found at bnet.com and intomobile.com.

Smart phones such as the iPhone, those powered by Google Android (such as the Motorola Droid and Google Nexus One), and other Linux variants (such as Symbian and Maemo) show a great deal of promise for the mobile technology tour, as they typically contain GPS and compass capabilities which allow applications to be aware of a user's location and direction. The emergence of the iPad and other tablet devices such as Courier and Archos also are promising platforms and the iPad is inspiring similar products from other manufacturers such as Samsung and LG. Tablet devices typically contain Assisted GPS functionality along with a digital compass, thus for the purposes of the mobile tour they could be considered to be much like a large smart phone (sans telephony, but with all other features intact including 3G data access and 802.x wireless data connectivity). Most of the non-iPad devices currently on the market are running Google's Android mobile platform.

Other technological platforms that need to be taken into consideration for supporting the mobile tour are: portable audio players (such as the iPod Shuffle, Network Walkman, The Cube, etc.), and portable audio/video players (such as the iPod Nano, Touch, etc.) These devices can be served by simply providing MP3 audio and an acceptable web video format.

### Software

Currently, there are a large number of native applications written for mobile devices (such as those available through Apple's App Store), though there is an emerging trend toward developing for the web using tools that allow access to some of the device's hardware and enable the use of a richer feature set than is typically allowed by web development alone. This promises to open up the realm of application development and allow more devices to run more complex and feature-rich applications. PhoneGap is an open-source development framework that allows the development of platform-independent mobile web applications that take advantage of the native hardware capabilities of a given mobile device such as geolocation, accelerometer, compass, local storage, etc. The employment of a framework such as PhoneGap combined with web-native scripting and mark-up languages

promises a combined environment that can provide the rich user experience of a native application without limiting the prospective audience to those using a particular brand of mobile device.

### **Appendix 3. “Debt Slavery” as Experienced by Nellie “Chubbs” Miles**

“Debt slavery” is depicted by Nellie “Chubbs” Miles in one of her stories about how her family and other sharecroppers were “compensated” (or not compensated) for their cultivation of a portion of the land they lived on and worked for the landowner. In exchange for their cultivation of a “share” of the tobacco acreage, the family was given a small cabin to live in and a designated parcel of the owner’s land to cultivate. They were extended credit at the “plantation store” for all subsistence expenses such as flour, sugar, fat back meat, and fabric from which to make clothing. They also purchased on credit supplies needed to cultivate their crop such as: seeds, fertilizer, and other items. These goods were charged to their account at the store and at harvest time, there was a “settling up” with the landowner. The expenses of purchases at the plantation store were then to be subtracted from income generated by the family’s share of the harvest.

Miles explains that it was very rare that the family saw any “cash money” after accounts were settled. The explanation they were given by the land owner was that the cost of the goods purchased plus interest accrued exceeded or “broke even” with the income their share of the crop generated. Miles recounts that her father and mother and many others in the same situation thought they were being taken advantage of because of their lack of math skills and understanding of how interest is calculated. Miles and her sister attended school and were very good students and they learned to calculate interest and helped their illiterate parents keep track of purchases. By their calculations, the owner was cheating their family. After Chubbs’s parents got up the courage to question the owner’s accounting, they were retaliated against by a pick-up truck full of white men who drove around their cabin shooting their shotguns and rifles into the air. Miles recalls her mother screaming for her to gather together her younger siblings and to hide with them under the house to avoid being shot and possibly killed by a stray bullet.

## Appendix 4. Meet the Team

| Name                    | Role   | Qualifications   |
|-------------------------|--|--|
| Laurel C. Sneed         | <i>Project Director, Lead Researcher, Major Collaborator</i><br>Laurel C. Sneed coordinated and led all aspects of the planning and needs assessments, and participated in the live tour and major planning meeting, and as lead researcher, she was lead writer of the paper. | M.Ed. Instructional Design & Educational Technology; Project Manager of 11 highly successful NEH grants; Researcher and lecturer on Thomas Day social history; Creator and Leader of Crafting Freedom; Award-winning interactive media producer with 30+ years experience in the field   |
| Charles D. Sneed        | <i>Collaborator, Administrative Coordinator</i><br>Charlie Sneed managed all administrative aspects of the grant, contributed to the content and technology components of the white paper, and participated in the live tour and major planning meeting.                       | Master's degree in Human Ecology and an undergraduate degree in Economics; award-winning journalist; worked in public relations and sales; classroom teacher at the elementary and secondary levels; internal grants administrator on 11 NEH grants since the late 1990s; very knowledgeable and experienced using new and emerging technologies in educational applications |
| Jerome Bias             | <i>Collaborator</i><br>Participated in the live tour (including presenting on Thomas Day's work) and major planning meeting.   | Traditional cabinetmaker following in the footsteps of one of the upper South's most renowned cabinetmakers, Thomas Day (1801–ca.1861); provides woodworking demonstrations  |
| Vanessa Richmond Graves | <i>Advisory Board</i><br>Vanessa Graves participated in the needs assessment for interpreters at sites along 86, and participated in the live tour and major planning meeting.   | Tour Coordinator, Thomas Day House/Union Tavern Restoration Committee  |
| Juanita Holland         | <i>Collaborator</i><br>Participated in the live tour and major planning meeting and provided insight into game-based design.   | Ph.D. in Art History; cultural historian specializing in the arts of the African Diaspora with a focus on 19th century black artists and artisans; curator of "Narratives of African American Identity: The Collection of David C. Driskell" (a prestigious private collection spanning the 19th and 20th centuries).  |

| Name                  | Role   | Qualifications  |
|-----------------------|--|---|
| Danielle Kelly        | <i>Collaborator</i><br>Danielle Kelly assisted with editing the lessons-learned white paper and will provided meeting logistics and coordination, and participated in the live tour and major planning meeting.                          | M.A. in History; history researcher; graduate teaching experience; web and media designer/producer; two years experience with Crafting Freedom tour content; information design expertise   |
| Daniel Kelo           | <i>Collaborator</i><br>Daniel Kelo did research and reported on technology platforms to the group, wrote a detailed report about the technology to inform the white paper, and participated in the live tour and major planning meeting. | B.A. in Humanities; 20 years application development experience, including 12 years of web application development; two years experience with Crafting Freedom tour content   |
| Beverly McNeill       | <i>Advisory Board</i><br>Beverly McNeill was a general advisor and participated in the live tour and major planning meeting.   | Teacher Mentor and Educator with the Crafting Freedom Tours; 33 years in classroom teaching with special emphasis on black history and culture  |
| Nellie "Chubbs" Miles | <i>Contributor</i><br>Participated in the live tour (including presenting on her life in a generational sharecropping family along NC 86).   | Traditional seamstress and dressmaker (some of her sewing techniques have origins in West Africa); "living history" story teller and artisan; grew up in generational sharecropping along NC Highway 86 (her extraordinary life is a testament to the strength she has derived from her traditional rural African American upbringing). |
| Karen Oestricher      | <i>Advisory Board</i><br>Karen Oestricher participated in the needs assessment for interpreters at sites along 86 and participated in the live tour and major planning meeting.  | Director, Caswell County Historical Association; moved to rural Caswell County, North Carolina in the early 2000s; retired from a career in industry; she is a life-long lover of history and genealogy; volunteers for the Caswell County Historical Association   |
| Katherine Paulhaumus  | <i>Advisory Board</i><br>Katherine Paulhaumus participated in the needs assessment for interpreters at sites along 86, and participated in the live tour and major planning meeting.   | Director, Burwell School; bachelor's in public history; public history site coordinator since 2003; specializes in managing cultural resources; currently pursuing a graduate degree in historic preservation   |

| Name               | Role   | Qualifications  |
|--------------------|--|---|
| Leah Y. Potter     | <i>Collaborator</i><br>Leah H. Potter conducted the needs assessment with educators and teachers, participated in teleconferences and live meetings, advised on content design and media deployment, and reviewed and commented on draft of white paper.   | Co-Director of Teaching American History Programs at the American Social History Project; over a decade experience as a history educator and media producer; co-creator and coordinator of the first NEH Landmarks in American History workshop in Durham, North Carolina; producer of "Exploring the World of Thomas Day," an award-winning CD-Rom; completing her dissertation in U.S. cultural history |
| Donna Thompson Ray | <i>Collaborator</i><br>Donna Thompson Ray conducted the needs assessment with educators and teachers, participated in teleconferences and live meetings, advised on content design and media deployment, reviewed and commented on draft of white paper, and participated in the live tour and major planning meeting. | Project Director for Faculty Development Programs at the American Social History Project; Project Director of the NEH-funded Picturing U.S. History project, an on-line resource for teaching U.S. history with visual evidence; emphasis in teaching history through visual media, and material culture and the African-American experience  |
| John M. Vlach      | <i>Advisory Board</i><br>John M. Vlach served as an advisory board member focusing on historical issues and issues of reading and interpreting the historical and cultural landscape and material culture along 86 and participated in the live tour and major planning meeting.                                       | Professor of American Civilization and Anthropology at George Washington University; pre-eminent scholar on African American material culture; has written over 10 books, scores of articles, and reviews and has given hundreds of lectures in the United States and abroad; has been a consultant and presenter with the Apprend Foundation and the Thomas Day Education Project for 13 years           |

## Appendix 5. Agenda for the March Meeting

### Crafting Freedom Along 86: Discovering Hidden History with Mobile Technology

| Date                                      | Time                   | Event & Location   |
|---|------------------------|--|
| <b>FRIDAY<br/>MARCH 12<sup>TH</sup></b>   |                        |  |
|   | 5:45 p.m.              | <b>Meet at Lobby of the Hampton Inn</b> <ul style="list-style-type: none"> <li>Group will depart the Hampton Inn promptly at 5:45 p.m. to walk to the Chinese restaurant next door</li> </ul>  |
|   | 5:45 p.m. to 6:00 p.m. | <b>Short Walk to the Chinese Restaurant Next Door</b>  |
|   | 6:00 p.m. to 6:45 p.m. | <b>Chinese Buffet Dinner</b>   |
|   | 6:45 p.m. to 7:00 p.m. | <b>Return to Hampton Inn from Dinner</b>   |
|   | 7:00 p.m. to 8:30 p.m. | <b>Orientation (Hampton Inn Conference Room)</b> <ul style="list-style-type: none"> <li>Overview of grant/project and weekend agenda (Laurel Sneed)</li> <li>Technology overview (Daniel Kelo)</li> <li>Introduction to buildings and traditional structures along NC 86 (John M. Vlach)</li> </ul>  |
| <b>SATURDAY<br/>MARCH 13<sup>TH</sup></b> |                        |  |
|   | 8:30 a.m. to 9:00 a.m. | <b>Drive through the Country to the Burwell School</b> <ul style="list-style-type: none"> <li>Group departs promptly at 8:30 a.m. and travels together in a 15-person van departing from the Hampton Inn in Chapel Hill to the Burwell School in Historic Hillsborough (part of this drive will be along the WPA tour route, NC Highway 86)</li> <li>Along the way we will hear an audio recording of part of the relevant text from the WPA guide and traditional string music indigenous to Orange county</li> </ul> |
|   | 9:00 a.m. to 9:40 a.m. | <b>Tour the Burwell School in Historic Hillsborough</b> <ul style="list-style-type: none"> <li>Brief tour of the Burwell School (Joe Otto)</li> <li>Introduction to Elizabeth Keckly (Joe Otto)</li> </ul>   |

|  |                          |   |
|--|--------------------------|---|
|  | 9:40 a.m. to 10:00 a.m.  | <b>Dear Mother, a Short Video of Elizabeth Keckly's Letter to her Mother (Burwell School)</b> <ul style="list-style-type: none"> <li>Video featuring an actor portraying Keckly with an interactive activity (Laurel Sneed)</li> </ul>  |
|  | 10:00 a.m. to 11:00 a.m. | <b>Crafting Freedom and Soul Stitchin' with Nellie "Chubbs" Miles (Burwell School)</b> <ul style="list-style-type: none"> <li>This traditional seamstress discusses her experiences growing up as a tobacco sharecropper's daughter along NC 86 in the mid-twentieth century (Nellie "Chubbs" Miles)</li> </ul>                         |
|  | 11:00 a.m. to 11:15 a.m. | <b>Break</b>  |
|  | 11:15 a.m. to 11:50 a.m. | <b>"Exploring the World of Thomas Day" (Burwell School)</b> <ul style="list-style-type: none"> <li>Brief introduction to Thomas Day and an interactive, story-driven CD-ROM game about his life, in which users have the simulated experience of conducting historical research with primary source documents (Laurel Sneed)</li> </ul> |
|  | 11:50 a.m. to 12:30 p.m. | <b>Lunch and Discussion (Burwell School)</b> <ul style="list-style-type: none"> <li>Group moves from the Burwell schoolhouse to inside the Burwell residential house for a box lunch delivered from Nantucket Grill</li> </ul>  |
|  | 12:30 p.m. to 1:15 p.m.  | <b>Drive through the Country to Yanceyville</b> <ul style="list-style-type: none"> <li>Group travels together from the Burwell School in Hillsborough to Yanceyville via Highway 86</li> <li>Along the way we will hear an audio recording of part of the relevant text from the WPA guide</li> </ul>                                   |
|  | 1:15 p.m. to 2:00 p.m.   | <b>Tour the Richmond-Miles Museum (Yanceyville)</b> <ul style="list-style-type: none"> <li>Tour of the Richmond-Miles Museum (Karen Oestreicher)</li> </ul>   |
|  | 2:00 p.m. to 2:30 p.m.   | <b>Tour the Caswell County Courthouse (Yanceyville)</b> <ul style="list-style-type: none"> <li>Brief introduction to the Caswell County Courthouse and the John "Chicken" Stevens story (Karen Oestreicher)</li> <li>Legend of Henrietta Jeffries, a mid-wife, and the Caswell County Courthouse (Vanessa Richmond Graves)</li> </ul>   |
|  | 2:30 p.m. to 3:00 p.m.   | <b>Drive through Country to Milton</b> <ul style="list-style-type: none"> <li>Group travels together from Yanceyville to Milton</li> <li>Along the way, John Vlach will comment on the built environment</li> </ul>   |
|  | 3:00 p.m. to 3:40 p.m.   | <b>Tour the Milton Presbyterian Church (Milton)</b> <ul style="list-style-type: none"> <li>Overview of the history of the Milton Presbyterian Church (Vanessa Richmond Graves and</li> </ul>  |



|   |                         |  |
|---|-------------------------|--|
|   |                         | Laurel Sneed) <ul style="list-style-type: none"> <li>Audio recording of Thomas Day's letter to his daughter</li> </ul>   |
|   | 3:45 p.m. to 4:25 p.m.  | <b>Tour the Union Tavern (Milton)</b> <ul style="list-style-type: none"> <li>Exploration of the Thomas Day furniture holdings at the hands-on museum (Jerome Bias)</li> </ul>  |
|   | 4:25 p.m. to 4:45 p.m.  | <b>Explore the Antique Shops of Milton</b>   |
|   | 4:45 p.m. to 6:00 p.m.  | <b>Drive through the Country from Milton to the Hampton Inn</b> <ul style="list-style-type: none"> <li>Group travels together from Milton to Chapel Hill</li> <li>Along the way we will hear an audio recording of part of the relevant text from the WPA guide</li> </ul>   |
| <b>SUNDAY<br/>MARCH 14<sup>TH</sup></b> |                         |  |
|   | 8:30 a.m. to 9:00 a.m.  | <b>Casual Breakfast (Hampton Inn Lobby)</b>  |
|   | 9:00 a.m. to 12:30 p.m. | <b>Discussing the Creation of the Re-versioned Mobile Technology Tour Along NC 86 (Hampton Inn Conference Room)</b> <ul style="list-style-type: none"> <li>Group discusses reactions to Saturday's tour; refines the learning outcomes and objectives for the re-versioned tour; breaks into small groups to assess which content and media elements from the tour are best for the re-versioned mobile tour; discusses how to tie together the various elements of the tour; makes recommendations about mobile technology; discusses creative options for linking sites and content/media together through a game; and much more.</li> </ul> |
|   | 12:30 p.m. to 1:15 p.m. | <b>Pizza Lunch (Hampton Inn Conference Room)</b>   |

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## Appendix 6. Content and Media Map

### Crafting Freedom Along NC 86: Content and Media for Points of Interest Along the Route

| POINT OF INTEREST   | CONTENT/MEDIA DESCRIPTION  | CONTENT AND MEDIA DEVELOPMENT STATUS                              | STANDARDS ALIGNMENT WITH NATIONAL CENTER FOR HISTORY IN THE SCHOOLS (UCLA)      |
|---|--|---|---|
| <b>Burwell School (Hillsborough)</b>                        | Tour and overview of the history of the Burwell School   | Developed live presentation (needs to be digitized)               |   |
|   | Lecture on Elizabeth Keckly's years at the Burwell School  | Developed live presentation (needs to be digitized)               | UCLA Era 2, Standard 3C <sup>i</sup>  |
|   | Lecture on "Behind the Scenes" from Keckly's Narrative   | Developed live presentation (needs to be digitized)               | UCLA Era 2, Standard 3C <sup>ii</sup><br>UCLA Era 4, Standard 2D <sup>iii</sup> |
|   | Short video titled <i>Dear Mother</i> featuring an actor portraying Elizabeth Keckly reading a letter that she wrote to her mother while enslaved at the Burwell School                            | Digital video   | UCLA Era 4, Standard 2D <sup>iv</sup>   |
|   | Images of Keckly, her dress designs, and Mary Todd Lincoln wearing dresses designed by Keckly  | Digital photos  | UCLA Era 2, Standard 3C <sup>v</sup><br>UCLA Era 4, Standard 2D <sup>vi</sup>   |
|   | Short video titled <i>My Natural Way to Sew</i> featuring Nellie "Chubbs" Miles and her way of sewing  | Digital video   |   |
|   | "Crafting Freedom with Nellie 'Chubbs' Miles" in which a traditional seamstress discusses her experiences growing up as a tobacco sharecropper's daughter along NC 86 in the mid-twentieth century | Developed live PowerPoint presentation with many images on slides |   |
| <b>Drive from Hillsborough to Yanceyville (Along NC 86)</b> | Relevant music   | MP3 files   |   |
|   | Recent scholarship on bright leaf tobacco culture  | Printed text  |   |
|   | Text on bright leaf tobacco from original Tour 11 of the WPA North Carolina Guide  | Rough audio file  |   |

| POINT OF INTEREST   | CONTENT/MEDIA DESCRIPTION  | CONTENT AND MEDIA DEVELOPMENT STATUS                               | STANDARDS ALIGNMENT WITH NATIONAL CENTER FOR HISTORY IN THE SCHOOLS (UCLA) |
|---|--|--|--|
| <b>Drive from Hillsborough to Yanceyville (Along NC 86)</b> | WPA photographs of tobacco fields  | Digital photos   |  |
|   | New photographs of tobacco fields (from Landmarks of 200 years of tobacco culture)   | Digital photos   |  |
|   | Text from Tour 11 of original WPA North Carolina Guide related to this stretch of highway (besides tobacco emphasis)                                     | Printed text in original WPA NC Guide                              |  |
|   | Oral history interviews with two women who grew up in generational sharecropping on land (upon which their ancestors were enslaved) owned by the Hesters | Digital video  |  |
|   | Story of a slave named Steven Slade who discovered bright leaf tobacco   | "From Seed to Leaf" Handout from the Duke Homestead (Printed text) |  |
| <b>Bartlett Yancey House (Yanceyville)</b>                  | Tour of restaurant that contains the only Thomas Day interior architecture open to the public  | Developed live presentation (needs to be digitized)                | UCLA Era 2, Standard 3C <sup>vii</sup>                                     |
| <b>Richmond-Miles Museum (Yanceyville)</b>                  | Tour and overview of the history of the Richmond-Miles Museum  | Developed live presentation (needs to be digitized)                |  |
|   | Site contains Thomas Day-related primary source documents and furniture  | Primary source documents   | UCLA Era 2, Standard 3C <sup>viii</sup>                                    |
| <b>Caswell County Courthouse (Yanceyville)</b>              | Tour of the Caswell County Courthouse  | Developed live presentation (needs to be digitized)                |  |
| <b>Drive from Yanceyville to Milton (off NC 86)</b>         | Relevant music   | MP3 files  |  |
|   | Commentary by John Vlach on houses and architecture along route 62   | A commentary by Dr. Vlach that has not been recorded               | UCLA Era 4, Standard 2D <sup>ix</sup>                                      |

| POINT OF INTEREST                                   | CONTENT/MEDIA DESCRIPTION  | CONTENT AND MEDIA DEVELOPMENT STATUS                                | STANDARDS ALIGNMENT WITH NATIONAL CENTER FOR HISTORY IN THE SCHOOLS (UCLA)          |
|---|--|---|---|
| <b>Drive from Yanceyville to Milton (off NC 86)</b> | Text from Tour 11 related to this stretch of highway (besides plantation emphasis)   | Printed text from original WPA NC guide                             |   |
| <b>Milton Presbyterian Church (Milton)</b>          | History of Thomas Day and the Pews at the Milton Presbyterian Church   | Two hours worth of unedited digital video                           | UCLA Era 2, Standard 3C <sup>x</sup>  |
|   | Recent scholarship about Thomas Day's Pastor, N. H. Harding  | Digital text  | UCLA Era 4, Standard 4A <sup>xi</sup>   |
|   | Primary source documents on N. H. Harding  | Printed text  | UCLA Era 4, Standard 4A <sup>xii</sup>  |
|   | Primary source documents regarding the church and Day's membership there   | Digital photos  | UCLA Era 2, Standard 3C <sup>xiii</sup><br>UCLA Era 4, Standard 2D <sup>xiv</sup>   |
|   | Thomas Day's letter to his daughter, Mary Ann  | Printed primary source document and rough audio-only recording      | UCLA Era 2, Standard 3C <sup>xv</sup><br>UCLA Era 4, Standard 2D <sup>xvi</sup>     |
| <b>Union Tavern (Milton)</b>                        | <i>Exploring the World of Thomas Day</i> (including 50 primary source documents)   | CD-ROM game with digital photographs and digital video reenactments | UCLA Era 2, Standard 3C <sup>xvii</sup><br>UCLA Era 4, Standard 2D <sup>xviii</sup> |
|   | <i>Uncovering the Hidden History of Thomas Day</i>   | Printed and electronic text   | UCLA Era 2, Standard 3C <sup>xix</sup><br>UCLA Era 4, Standard 2D <sup>xx</sup>     |
|   | Interviews on all aspects of Day and the experience of free blacks in the upper South in the nineteenth century                                      | Digital video   | UCLA Era 2, Standard 3C <sup>xxi</sup><br>UCLA Era 4, Standard 2D <sup>xxii</sup>   |
|   | Historical re-enactments of the operations of Day's shop (20 hours with interviews and recreations of Day's shop shot for a documentary film on Day) | Digital video   | UCLA Era 2, Standard 3C <sup>xxiii</sup>  |
|   | Lecture by a traditional cabinetmaker on "how to read" Day's furniture   | Developed live lecture (needs to be digitized)                      | UCLA Era 2, Standard 3C <sup>xxiv</sup>   |

| POINT OF INTEREST   | CONTENT/MEDIA DESCRIPTION                                       | CONTENT AND MEDIA DEVELOPMENT STATUS     | STANDARDS ALIGNMENT WITH NATIONAL CENTER FOR HISTORY IN THE SCHOOLS (UCLA)          |
|---|---|--|---|
| <b>Union Tavern (Milton)</b>  | 100+ images of Thomas Day furniture and primary source material | Slide format                             | UCLA Era 2, Standard 3C <sup>xxv</sup>  |
|   | "Thomas Day, Elizabeth Keckly, and the Free Black Connection"   | Slide show with a developed live lecture | UCLA Era 2, Standard 3C <sup>xxvi</sup><br>UCLA Era 4, Standard 2D <sup>xxvii</sup> |
| <b>Drive via Highway 119 from Yanceyville/ Semora back to NC 86</b> | Slave narrative of Moses Roper who was born along NC 119        | Digital text                             |   |

<sup>i</sup> UCLA Standard (Grades 9-12) Assess the contribution of enslaved and free Africans to economic development in different regions of the American colonies.

<sup>ii</sup> UCLA Standard (Grades 9-12) Assess the contribution of enslaved and free Africans to economic development in different regions of the American colonies; and UCLA Standard (Grades 7-12) Analyze overt and passive resistance to enslavement.

<sup>iii</sup> UCLA Standard (Grades 5-12) Identify the various ways in which African Americans resisted the conditions of their enslavement and analyze the consequences of violent uprisings.

<sup>iv</sup> UCLA Standard (Grades 7-12) Evaluate how enslaved African Americans used religion and family to create a viable culture and ameliorate the effects of slavery.

<sup>v</sup> UCLA Standard (Grades 9-12) Assess the contribution of enslaved and free Africans to economic development in different regions of the American colonies; and UCLA Standard (Grades 7-12) Analyze overt and passive resistance to enslavement.

<sup>vi</sup> UCLA Standard (Grades 5-12) Identify the various ways in which African Americans resisted the conditions of their enslavement and analyze the consequences of violent uprisings.

<sup>vii</sup> UCLA Standard (Grades 9-12) Assess the contribution of enslaved and free Africans to economic development in different regions of the American colonies.

<sup>viii</sup> UCLA Standard (Grades 9-12) Assess the contribution of enslaved and free Africans to economic development in different regions of the American colonies.

<sup>ix</sup> UCLA Standard (Grades 5-12) Describe the plantation system and the roles of their owners, their families, hired white workers, and enslaved African Americans.

<sup>x</sup> UCLA Standard (Grades 9-12) Assess the contribution of enslaved and free Africans to economic development in different regions of the American colonies.

<sup>xi</sup> UCLA Standard (Grades 7-12) Analyze changing ideas about race and assess the reception of proslavery ideologies in the North and South; and UCLA Standard (Grades 5-12) Explain the fundamental beliefs of abolitionism and compare the antislavery positions of the "immediatists" and

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“gradualists” within the movement; and UCLA Standard (9-12) Compare the positions of African American and white abolitionists on the issue of the African American's place in society.

<sup>xii</sup> UCLA Standard (Grades 7-12) Analyze changing ideas about race and assess the reception of proslavery ideologies in the North and South; and UCLA Standard (Grades 5-12) Explain the fundamental beliefs of abolitionism and compare the antislavery positions of the “immediatists” and “gradualists” within the movement; and UCLA Standard (9-12) Compare the positions of African American and white abolitionists on the issue of the African American's place in society.

<sup>xiii</sup> UCLA Standard (Grades 7-12) Analyze overt and passive resistance to enslavement.

<sup>xiv</sup> UCLA Standard (Grades 5-12) Identify the various ways in which African Americans resisted the conditions of their enslavement and analyze the consequences of violent uprisings.

<sup>xv</sup> UCLA Standard (Grades 7-12) Analyze overt and passive resistance to enslavement.

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